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THE

ONTARIO WATER RESOURCES

COMMISSION

# WATER POLLUTION SURVEY

of the

# TOWNSHIP OF MATCHEDASH

# COUNTY OF SIMCOE

1967

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Report on a water pollution survey of the township Matchedash, county of Simcoe.

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Report

on a

# Water Pollution Survey

of the

# TOWNSHIP OF MATCHEDASH

County of Simcoe

September 1967

District Engineers Branch

Division of Sanitary Engineering

# INDEX


| SECTION | | PAGE NO. |
|---|---|---|
| I | INTRODUCTION | 1 |
| II | GENERAL INFORMATION | 1 |
| III | WATER SUPPLY | 2 |
| IV | WATER POLLUTION | 2 |
| | 1. Results of Samples Collected | 2 |
| | 2. Private Sewage Disposal Systems | 3 |
| | 3. Pleasure Craft | 4 |
| | 4. Refuse Disposal | 5 |
| | 5. Severn Falls Area | 5 |
| | 6. Tea Lake | 7 |
| | 7. Swift Rapids | 8 |
| | 8. Big Chute | 9 |
| | 9. General Discussion | 9 |
| V | SUMMARY | 10 |
| VI | RECOMMENDATIONS | 10 |

APPENDIX

Explanation and significance of Laboratory Analyses
Table 1 - Results of Samples Collected from Severn River
Table 2 - Results of Samples Collected from Tea Lake (OWRC)
Table 2A- Results of Samples Collected from Tea Lake (Health Unit)
Table 3 - Results of Samples Collected from MacLean Lake
Table 4 - Results of Samples Collected from Severn Falls Dumpsite Area
Table 5 - Results of Miscellaneous Samples

MAP

Showing sampling point locations

# ONTARIO WATER RESOURCES COMMISSION

# R E P O R T

## I INTRODUCTION

A water pollution survey was made in the Township of Matchedash to locate and record any existing and potential sources of water pollution in the municipality. Where these sources were noted, recommendations concerning their abatement are made to the parties concerned.

On July 19, 20, and 21, 1967, samples were collected from the major lakes and rivers within the township. The results of the samples submitted for bacteriological and chemical examinations are listed in the appended tables. Also listed are the results of samples collected from Tea Lake by the Simcoe County Health Unit, and an explanation of the laboratory analyses.

## II GENERAL INFORMATION

Matchedash is a rural township having no incorporated municipalities within its boundaries. The northern part of the municipality consists entirely of rocky terrain surrounded by swamp areas. The section of the Severn River extending from the Big Chute power dam to the point where it enters Sparrow Lake, forms the northern boundary of the township. Part of the western boundary is formed by Gloucester Pool.

A number of small farms are located in the southern portion of the township; but it is largely undeveloped with at least one-half of the municipality being inaccessible by road. The area is

spotted with small waterways and lakes; however, due to its undeveloped nature, only the following major recreational waterways were sampled:

Severn River - (from Gloucester Pool to Sparrow Lake)
Tea Lake
MacLean Lake

Sampling of a more intensive nature was carried out at Severn Falls. The Matchedash and North rivers were also sampled at various accessible points.

## III WATER SUPPLY

There are no municipal water supplies in the township. Farm water supplies are obtained from wells and the small waterways in the area. Most of the cottagers depend on surface-water supplies. Therefore, the individual user maintains the quality of his own water supply to his own satisfaction. The Commission recommends that a minimum treatment of chlorination should be applied to surface water intended for drinking. If such treatment is not available, then the water should be boiled before consumption.

## IV WATER POLLUTION

### 1. Results of Samples Collected

During the survey, approximately 130 samples were collected throughout the area for bacteriological and chemical analyses. More than ninety per cent of the samples yielded results within the OWRC objectives for surface water.

Approximately 15 bacteriological and chemical samples were collected in the Severn Falls area; four of the bacteriological

samples were found to be in excess of the Commission objectives. Excessive BOD, suspended solids and coliform counts were present in the samples collected adjacent to the Severn Falls dump site.

A slightly high coliform count was noted in one sample collected from Tea Lake.

These sample results indicate that surface waters are generally of satisfactory quality in the area. However, in any locality such as this, there can be localized pollution problems, and these are discussed individually in the following text.

2. Private Sewage Disposal Systems

Private sewage disposal systems such as septic tanks and tile beds, cesspools, or privies, are employed by the majority of the summer population. These systems are subject to the approval of the local health authorities, in this case the Simcoe County Health Unit.

Throughout any area where there is a heavy concentration of summer cottages, there is always concern regarding malfunctioning sewage disposal systems causing pollution of the water. Individuals should be aware of the possible effects of pollution, especially where their own drinking water supply is being taken from a surface source. Where anyone feels there may be a problem either in establishing a sewage disposal system, or in the operation of an established system he should contact the local health authority for advice.

Although areas were observed where the disposal of sewage from septic tank systems would appear to be very difficult,

if not impossible, there were no direct discharges noted to the river from a private cottage. There are a small number of boat houses on the Severn River containing upper-level living quarters, and in one instance the surrounding water appeared quite discoloured as if by a domestic waste discharge. However, the samples collected in the area (Sampling Point No. S-14.9) did not reveal excessive contamination.

3. Pleasure Craft

Pollution from pleasure craft in the area is not a critical problem. Occasionally persons can be seen to dump refuse and other solid wastes directly into the water. This problem is primarily one of the esthetics and its correction requires the support of all individual boat owners.

To assist in assuring that boaters and the public will continue to enjoy clean recreational waters in Ontario, a regulation providing for control of the discharge of sewage from pleasure boats into any water in the Province has been made under the Ontario Water Resources Commission Act. The regulation which comes into effect on June 1, 1968, provides that any pleasure boat (owned by an Ontario resident) having sleeping accommodations, must be equipped with a marine toilet and an approved device which will store or dispose of human sewage. The discharge of such sewage in these pleasure boats and the installation of the toilet and the approved device are also controlled by regulation to ensure that sewage is prevented from entering any water.

4. Refuse Disposal

Two refuse disposal sites are located in the township. The site serving the southwestern portion of the township and the MacLean Lake cottagers is located in Concession 1. This site is situated in a fairly high area surrounded by rocks and it appears to be a suitable location with regard to the prevention of water pollution.

The Severn Falls dump site does present a water pollution problem and is discussed under the next heading.

5. Severn Falls Area

(a) General - Samples were collected from approximately 20 points in the concentrated area of Severn Falls. All of the chemical samples revealed BOD and suspended solids concentrations within the OWRC objectives for surface waters. However, four of the bacteriological samples contained coliforms in excess of the recommended limit of 2400 organisms per 100 millilitres, indicating that some impairment of the water quality is occurring.

The entire waterfront in this area consists of docking facilities and an abundance of various-sized watercraft use them throughout the summer.

The following sewage disposal systems are employed in this area:

| Name of Resident | Sewage Disposal System |
|---|---|
| Mr.D. Smith, General Store and Marina. | Privy used for private residence; no other waste disposal facilities. |

| Name of Resident | Sewage Disposal System |
|---|---|
| Williamson's Marina. | Chemical toilet utilizing a pail which is taken away for disposal provided for customers.<br><br>Private residence employs a septic tank and tile bed system; no evidence of malfunction of this system was noted. |
| Creighton's Store. | A septic tank and tile bed is employed. Due to the inadequacy of the system it is pumped out on a routine basis and the contents are disposed of in the local refuse-disposal site. |
| Hall-Lovering Restaurant. | Two septic tanks, capacities of 400 and 200 gallons-no tile bed. Reportedly, tanks are pumped approximately four times during the summer season. |
| Beckstead Real Estate Office and Private Residence. | The office does not contain sanitary facilities. The private residence is served by a small toilet which sits on a 150-gallon tank suspended directly over the water. Reportedly it is pumped out by a commercial septic tank pumper when required. |

Complaints which have been received concerning the Severn Falls area are generally centered around sewage disposal system serving Creighton's Store. During the fall of 1966, at the time of a heavy rain storm, an overflow from the septic tank to the river occurred. At the present time, surface water is still a problem in the area and much of the liquid pumped from the tank is surface water. There is a rock filled ditch which runs from the tile bed system serving the store to the Severn River. However, a discharge through this ditch has not been noted during any of the Commission investigations. It should be noted that Mr. Creighton has gone to considerable work

and expense to ensure that this does not happen.

All residents of the Severn Falls area should be fully aware of their responsibility to ensure that wastes from their premises do not reach a watercourse and are disposed of in a satisfactory manner. This will require the co-operation of everyone concerned. Where there is a violation of this recommendation, it should be reported immediately to the Simcoe County Health Unit or the OWRC.

(b) Refuse Disposal Area - Refuse, garbage and septic tank pumpings are dumped into a swampy area beside the Severn Falls Road just south of the community. This swamp drains for some 3 miles to its ultimate outlet at Tea Lake. Many cottagers located on Tea Lake and other residents of the township have expressed concern over this area. Samples collected from the swamp indicated that contamination of water is occurring adjacent to the disposal area. Although the possibility of the pollutants reaching Tea Lake are somewhat remote, it is generally undesirable to put such large amounts of organic matter directly into a watercourse. Therefore, this site should be abandoned in favour of a new and more suitable site.

6. Tea Lake

Results of samples collected from Tea Lake during this survey as well as those collected by the Simcoe County Health Unit are appended. The sample results indicate excellent water quality in this lake.

Although one sample collected from Red Fox Bay was in excess of the Commission surface-water objectives, the other samples

collected in the area, including one collected further upstream in the creek which is the tributary flowing from the swamp area, were found to be satisfactory.

Here, as in the other areas previously mentioned, individual owners should ensure the provision of adequate sewage disposal facilities for their respective premises, and where improper sewage disposal practices are noted, it would facilitate corrective action if the observer were to report these to the proper authorities.

7. Swift Rapids

(a) Department of Transport - The Department of Transport operates canal locks at this point on the Severn River. Recently, modern public washrooms have been constructed, utilizing a septic tank and tile bed system for sewage disposal.

(b) Orillia Water Light and Power Commission - This commission operates a power station beside the canal locks. In the past, the area had been developed to the point of being a small settlement, but presently, most of the buildings are being dismantled and only five or six men are employed. The only living quarters in use are those of the plant superintendent. Toilet facilities in this residence drain to a 1,000-gallon septic tank which has a drain to the river downstream from the dam. The sink drains also discharge to an area adjacent to the river. Sanitary facilities are also contained in the powerhouse. These drain directly to the sluice-way. Reportedly, the power system is being altered to turn it into a one-man operation in the near future. However, it is recommended that the direct discharge of the

sanitary wastes to the river be eliminated.

8. Big Chute

(a) Department of Transport - A marine railway is operated at this site by the Department of Transport. The public facilities here consist of privies which are located at the upper end of the railway. These facilities do not appear to be presenting a water-pollution problem.

(b) Ontario Hydro - The Ontario Hydro operates a generating station here. Reportedly, washroom facilities located in the generating station drain to a septic tank and tile bed system located at the foot of the dam. Apparently the operation is carried on by remote control and, therefore, it is seldom that anyone is present at the power station.

There are also several private homes and cottages in the area; however, there are no apparent water pollution problems.

9. General Discussion

For the most part, the bacteriological quality of the water in the areas tested was found to be excellent. In many instances, a resident may collect one or two samples in an area and misinterpretation of the sample result can cause undue alarm in regard to water pollution and lead to misconceptions regarding the quality of various lakes. It is essential that the vacationing public realize the use of unprotected surface-water supplies for drinking is a hazardous practice and all surface supplies should be chlorinated.

The quality requirements for drinking and culinary needs are quite different from those for recreational purposes and this should always be borne in mind when interpreting the sample results. Quality objectives for natural waters in Ontario are based essentially on the requirements for swimming and if adequate treatment, as mentioned above, is given, waters within this objective are considered to be satisfactory for water-supply needs. If this quality limit is exceeded unduly, it then becomes apparent that there is a water pollution problem and the sources must be found and corrected.

## V SUMMARY

This is a report on a water pollution survey which was made in the Township of Matchedash, the purpose of which was to locate and record any existing sources of water pollution. Generally the quality of the water in the area, as indicated by the sampling results, is very good. There are, however, the following localized problem areas where recommendations concerning improvements to existing situations are made:

Concentrated Area of Severn Falls
The Severn Falls Garbage Disposal Site
Orillia Water Light and Power Commission Waste Disposal System

## VI RECOMMENDATIONS

1. The residents of Severn Falls should take every precaution to ensure that sanitary wastes do not reach the adjacent waters of the Severn River.

2. Where a violation of the above recommendation can be substantiated, it should be reported immediately to the Simcoe County Health Unit or the OWRC.

3. The Severn Falls garbage disposal site should be relocsted in an area which will prove less likely to cause pollution of ground or surface water.

4. The Orillia Water Light and Power Commission should eliminate the direct discharge of its sanitary facilities to the Severn River.

5. All new sewage disposal installations in the area should receive approval of the local health authorities. Where problems are encountered with present facilities, the advice of the health authorities should be sought.

6. Surface-water supplies which are used for drinking purposes should have a minimum treatment of chlorination or boiling before human consumption.

/elc

Prepared by:

M.M. Holy, Technician-
Sanitary Engineering,
Div.of Sanitary Engineering.

## EXPLANATION AND SIGNIFICANCE OF LABORATORY ANALYSES

### A Bacteriological Examination

Bacteriological examinations were performed on samples from the watercourse. The Membrane Filter technique was used to obtain a direct enumeration of coliform organisms. These organisms are normal inhabitants of the intestines of man and other warm blooded animals. They are always present in sewage and are generally minimal in other pollutants. The results of the examinations are reported as M.F. Coliform count per 100 ml.

The MPN index reported by Regional Health Laboratories on water as the Most Probable Number (MPN) per 100 millilitres of sample is employed to determine the count of coliform bacteria present in water supplies.

The Commission's objective for surface waters in Ontario is a coliform count of not greater than 2,400 organisms per 100 ml.

### B Chemical Analysis

The chemical analysis performed on stream and outfall samples included determinations for biochemical oxygen demand and suspended solids.

#### (1) Biochemical Oxygen Demand (BOD)

Biochemical Oxygen Demand is reported in parts per million (ppm) and is an indication of the amount of oxygen required for stabilization of decomposable organic matter present in sewage, polluted waters or industrial wastes. The completion of the test requires 5 days, under the controlled incubation temperature of

$20^{\circ}C$.

The Commission's water quality objectives are (i) for stream water - a 5-day BOD of not greater than 4 ppm. (ii) for storm sewer, water pollution control plant and industrial waste discharges - a 5-day BOD of not greater than 15 ppm.

(2) Solids

The laboratory does tests to determine the total and suspended solids in a sample. The value for dissolved solids is determined by taking the mathematical difference between the total and suspended solids.

The concentration of suspended solids expressed in parts per million (ppm) is generally the most significant of the solids analyses in regard to stream water and outfall discharge qualities.

The OWRC's objective for discharge is a suspended solids concentration of not greater than 15 ppm.

TOWNSHIP OF MATCHEDASH

RESULTS OF SAMPLES COLLECTED FROM SEVERN RIVER

TABLE NO. 1

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| S- 3.9 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 32 |
| S- 4.2 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 8 |
| S- 4.4 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 8 |
| S- 4.8 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 68 |
| S- 5.6 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 24 |
| S- 6.0 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 64 |
| S- 6.8 | Location as per Map of Gloucester Pool. | Jul.20/67 | - | - | - | - | 56 |
| S- 7.2 | In Little Chute. | Jul.20/67 | - | - | - | - | 40 |
| S- 7.8 | Opposite Horseshoe Island. | Jul.20/67 | - | - | - | - | 28 |
| S- 8.04 | At Bottom of Big Chute. | Jul.20/67 | - | - | - | - | 14 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids | | | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| | | | | Total (ppm) | Susp. (ppm) | Diss. (ppm) | |
| S- 8.05 | At Top of Big Chute. | Jul.20/67 | - | - | - | - | 44 |
| S- 8.3 | At Richie Island. | Jul.20/67 | - | - | - | - | 108 |
| S- 8.7 | Narrows East of Tea Lake Mouth. | Jul.19/67 | - | - | - | - | 56 |
| S- 9.2 | Opposite Austin Island. | Jul.19/67 | - | - | - | - | 68 |
| S- 9.6 | At Copp Point. | Jul.19/67 | - | - | - | - | 120 |
| S- 9.8 | At Chad's Island. | Jul.19/67 | - | - | - | - | 32 |
| S-10.1 | Halfway to Chad's Island. | Jul.19/67 | - | - | - | - | 72 |
| S-10.3 | Opposite Wood Bay. | Jul.19/67 | - | - | - | - | 60 |
| S-10.6 | At Camp Nagiwa. | Jul.19/67 | - | - | - | - | 150 |
| S-10.8 | Halfway to Camp Nagiwa. | Jul.19/67 | - | - | - | - | 40 |
| S-11.2 | At Buckskin Island. | Jul.19/67 | - | - | - | - | 12 |
| S-11.7 | At Railroad Bridge. | Jul.19/67 | - | - | - | - | 36 |
| S-11.8 | At Linger Longer Lodge. | Jul.20/67 | - | - | - | - | 136 |
| S-11.9 | Just West of Real Estate Office. | Jul.20/67 | - | - | - | - | 180 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| S-12.0 | Opposite Real Estate Office (100 feet out). | Jul.20/67 | - | - | - | - | 24 |
| S-12.0 A | Opposite Real Estate Office. | Jul.20/67 | - | - | - | - | 64 |
| S-12.0 B | End of Long Dock at Real Estate Office. | Jul.21/67 | 0.7 | 78 | 4 | 74 | 344 |
| S-12.0 C | From Dock beside Real Estate Office (at Point) | Jul.21/67 | 1.3 | 68 | 7 | 61 | 8,500 |
| S-12.0 D | At end of Restaurant Dock. | Jul.21/67 | 1.3 | 86 | 6 | 80 | 4,800 |
| S-12.0 E | Just off Reported Ditch at Corner of Store. | Jul.21/67 | 0.9 | 100 | 5 | 95 | 4,500 |
| S-12.0 F | Downstream end of Overhead Walkway. | Jul.21/67 | 1.0 | 86 | 3 | 83 | 6,400 |
| S-12.1 | Opposite Marina, Store, Restaurant (100 feet out). | Jul.20/67 | - | - | - | - | 12 |
| S-12.1 A | Opposite Marina, Store, and Restaurant. | Jul.20/67 | - | - | - | - | 1,700 |
| S-12.1 B | End of Smith's New Dock. | Jul.21/67 | 1.2 | 82 | 5 | 77 | 320 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| S-12.1 C | Upstream end of "L" Dock (Smiths ). | Jul.21/67 | 1.1 | 114 | 3 | 111 | 300 |
| S-12.1 D | Downstream end of "L" Dock (Smiths ). | Jul.21/67 | 1.3 | 80 | 2 | 78 | 1,300 |
| S-12.1 E | Middle of Dock in front of Texaco Pumps. | Jul.21/67 | 1.0 | 100 | 4 | 96 | 2,300 |
| S-12.4 | Opposite Smiths Dock (100 feet out). | Jul.20/67 | - | - | - | - | 88 |
| S-12.4 A | Opposite D. Smiths Dock | Jul.20/67 | - | - | - | - | 84 |
| S-12.4 B | Upstream end of D. Smiths Pump Dock (Esso). | Jul.21/67 | 0.9 | 50 | 2 | 48 | 64 |
| S-12.4 C | Middle of D. Smiths Pump Dock (Esso). | Jul.21/67 | 0.9 | 88 | 6 | 82 | 68 |
| S-12.4 D | Downstream end of D. Smiths Pump Dock (Esso). | Jul.21/67 | 1.1 | 84 | 5 | 79 | 144 |
| S-12.89 L | Just East of D. Smith. | Jul.20/67 | - | - | - | - | 76 |
| S-12.89 R | Jone's Cottage (South Side). | Jul.20/67 | - | - | - | - | 312 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day Bod (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| S-13.0 L | Tamarac Park (South Side). | Jul.20/67 | - | - | - | - | 32 |
| S-13.0 R | Just West of Flat Rock Point (South Side). | Jul.20/67 | - | - | - | - | 72 |
| S-13.2 L | SSR Roberston. | Jul.20/67 | - | - | - | - | 92 |
| S-13.2 R | Cottage (North Side). | Jul.20/67 | - | - | - | - | 336 |
| S-13.3 L | Near Waubic Inn. | Jul.20/67 | - | - | - | - | 124 |
| S-13.3 R | At Paterson Boat House Broadview Boatel. | Jul.20/67 | - | - | - | - | 48 |
| S-13.4 | Downstream from Flat Rock Narrows. | Jul.20/67 | - | - | - | - | 36 |
| S-13.6 | Entrance to Flat Rock Narrows | Jul.20/67 | - | - | - | - | 28 |
| S-13.7 | Mouth of Cherry Creek Bay. | Jul.20/67 | - | - | - | - | 68 |
| S-13.8 | Small Island - Brown's Cottage. | Jul.20/67 | - | - | - | - | 112 |
| S-13.9 | At Hungarian Bay. | Jul.20/67 | - | - | - | - | 28 |
| S-14.3 | Upstream from Hungarian Bay. | Jul.20/67 | - | - | - | - | 72 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| S-14.9 | Downstream from Narrows. | Jul.20/67 | 0.7 | 166 | 6 | 160 | 68 |
| S-15.0 | At Narrows Downstream from Dam. | Jul.20/67 | - | - | - | - | 20 |
| S-15.40 R | Below Dam. | Jul.20/67 | 0.8 | 154 | 7 | 147 | 12 |
| S-15.40 L | Below Locks. | Jul.20/67 | - | - | - | - | 28 |
| S-15.41 | At Swift Rapids. | Jul.20/67 | - | - | - | - | 76 |
| S-15.8 | Two-thirds of distance between Hydro Glen and Swift Rapids. | Jul.20/67 | - | - | - | - | 12 |
| S-16.4 | One-third of distance between Hydro Glen and Swift Rapids. | Jul.20/67 | - | - | - | - | 72 |
| S-17.2 | At Hydro Glen. | Jul.20/67 | - | - | - | - | 8 |
| S-17.6 | Halfway between Portage Bay and Hydro Glen. | Jul.20/67 | - | - | - | - | 44 |
| S-18.2 | At Portage Bay | Jul.20/67 | - | - | - | - | 12 |
| S-19.1 | Opposite Morrison's Creek. | Jul.20/67 | - | - | - | - | 72 |

TABLE NO. 1 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids | | | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| | | | | Total (ppm) | Susp. (ppm) | Diss. (ppm) | |
| S-19.6 | At Sparrow Chute | Jul.20/67 | - | - | - | - | 40 |
| S-19.9 | Halfway between Lion's Head and Sparrow Lake. | Jul.20/67 | - | - | - | - | 12 |
| S-20.6 | At Lions' Head. | Jul.20/67 | - | - | - | - | 48 |
| S-21.8 | Opposite River Point-Lodge on North Side. | Jul.20/67 | - | - | - | - | 32 |
| S-22.8 | Opposite West Bay | Jul.20/67 | - | - | - | - | 28 |

## TOWNSHIP OF MATCHEDASH

## RESULTS OF SAMPLES COLLECTED FROM TEA LAKE (OWRC SAMPLES)

### TABLE NO. 2

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| T- 1 | Adjacent to Phip's Cottage. | Jul.19/67 | - | - | - | - | 164 |
| T- 2 | Adjacent to Phip's Cottage. | Jul.19/67 | - | - | - | - | 88 |
| T- 3 | Adjacent to Phip's Cottages. | Jul.19/67 | - | - | - | - | 48 |
| T- 4 | At Mouth of Creek Redfox Bay. | Jul.19/67 | - | - | - | - | 5,000 |
| T- 5 | In Creek. | Jul.19/67 | - | - | - | - | 900 |
| T- 6 | At Mouth of Creek Redfox Bay. | Jul.19/67 | - | - | - | - | 40 |
| T- 7 | Off Lot No. 76 (R. Watson). | Jul.19/67 | - | - | - | - | 340 |
| T- 8 | South Bay - Frankland's Cottage. | Jul.19/67 | - | - | - | - | 48 |
| T- 9 | West Bay. | Jul.19/67 | - | - | - | - | 72 |

TABLE NO. 2 (CONTD)

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| T-10 | At Narrows - Centre of Tea Lake. | Jul.19/67 | - | - | - | - | 80 |
| T-11 | At Narrows - Opposite Side. | Jul.19/67 | - | - | - | - | 72 |
| T-12 | At Lot No. 6. | Jul.19/67 | - | - | - | - | 160 |
| T-13 | At Store. | Jul.19/67 | - | - | - | - | 116 |
| T-14 | Halfway to River Mouth. | Jul.19/67 | - | - | - | - | 44 |
| T-15 | At Mount of Exit Narrows. | Jul.19/67 | - | - | - | - | 56 |
| T-16 | At Bridge where River enters Severn River. | Jul.19/67 | - | - | - | - | 80 |

TOWNSHIP OF MATCHEDASH

RESULTS OF SAMPLES COLLECTED FROM TEA LAKE BY SIMCOE COUNTY HEALTH UNIT

SWIM SAMPLES TEA LAKE

TABLE NO. 2A

| Sample No. | Source | Date | Coliform Organisms | E.coli |
|---|---|---|---|---|
| 1 | North Shore, East side. | Jul.18/67 | 4 | 4 |
| 2 | North Shore, East side. | Jul.18/67 | 7 | 4 |
| 3 | North Shore, East side. | Jul.18/67 | 9 | 9 |
| 4 | North Shore, East side. | Jul.18/67 | 7 | 0 |
| 5 | North Shore, East side. | Jul.18/67 | 3 | 0 |
| 6 | North Shore, East side. | Jul.18/67 | 43 | 23 |
| 7 | North Shore, East side. | Jul.18/67 | 15 | 9 |
| 9 | North Shore, West side. | Jul.18/67 | 150 | 150 |
| 10 | North Shore, West side. | Jul.18/67 | 93 | 6 |
| 11 | North Shore, West side. | Jul.18/67 | 430 | 430 |
| 12 | North Shore, West side. | Jul.18/67 | 43 | 0 |
| 13 | North Shore, West side. | Jul.18/67 | 23 | 0 |
| 14 | North Shore, West side. | Jul.18/67 | 43 | 23 |
| 15 | North Shore, West side. | Jul.18/67 | 9 | 9 |

TABLE NO. 2A (CONTD)

| Sample No. | Source | Date | Coliform Organisms | E.coli |
|---|---|---|---|---|
| 16 | South Shore, East side. | Jul.18/67 | 14 | 0 |
| 17 | South Shore, East side. | Jul.18/67 | 7 | 4 |
| 18 | South Shore, East side. | Jul.18/67 | 3 | 0 |
| 19 | South Shore, East side. | Jul.18/67 | 4 | 0 |
| 21 | South Shore, West side. | Jul.18/67 | 4 | 0 |
| 22 | South Shore, West side. | Jul.18/67 | 3 | 0 |
| 23 | South Shore, West side. | Jul.18/67 | 11 | 11 |
| 24 | South Shore, West side. | Jul.18/67 | 0 | 0 |
| 25 | South Shore, West side. | Jul.18/67 | 0 | 0 |
| 26 | South Shore, West side. | Jul.18/67 | 9 | 9 |
| 27 | South Shore, West side. | Jul.18/67 | 4 | 4 |

TOWNSHIP OF MATCHEDASH

RESULTS OF SAMPLES COLLECTED FROM MACLEAN LAKE

TABLE NO. 3

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| M- 1 | Location as per Map. | Jul.20/67 | No Sample Reported | | | | |
| M- 2 | Location as per Map. | Jul.20/67 | - | - | - | - | 1,200 |
| M- 3 | Location as per Map. | Jul.20/67 | - | - | - | - | 900 |
| M- 4 | Location as per Map. | Jul.20/67 | - | - | - | - | 4 |
| M- 5 (a) | Location as per Map. | Jul.20/67 | - | - | - | - | 28 |
| (b) | Location as per Map. | Jul.20/67 | - | - | - | - | 56 |
| M- 6 (a) | Location as per Map. | Jul.20/67 | - | - | - | - | 216 |
| (b) | Location as per Map. | Jul.20/67 | - | - | - | - | 280 |
| M- 7 | Location as per Map. | Jul.20/67 | - | - | - | - | 72 |
| M- 8 | Location as per Map. | Jul.20/67 | - | - | - | - | 84 |
| M- 9 | Location as per Map. | Jul.20/67 | - | - | - | - | 104 |
| M-10 | Location as per Map. | Jul.20/67 | - | - | - | - | 80 |

TOWNSHIP OF MATCHEDASH

SAMPLES COLLECTED NEAR SEVERN FALLS DUMPSITE

TABLE NO. 4

| Sampling Point No. | Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|---|
| D- 1 | Upstream from Dump. | Jul.21/67 | 6.8 | 188 | 18 | 170 | 580 |
| D- 2 | Adjacent to Dump. | Jul.21/67 | 155.0 | 734 | 482 | 252 | 11,000 |
| D- 3 | Downstream from Dump. | Jul.21/67 | 9.4 | 148 | 53 | 85 | 540 |
| D- 4 | At Railroad Tracks. | Jul.21/67 | 7.2 | 294 | 151 | 143 | 310 |

TOWNSHIP OF MATCHEDASH

RESULTS OF MISCELLANEOUS RIVER SAMPLES

TABLE NO. 5

| Description of Sampling Point | Date | 5-Day BOD (ppm) | Solids Total (ppm) | Solids Susp. (ppm) | Solids Diss. (ppm) | Coliforms per 100 ML |
|---|---|---|---|---|---|---|
| Matchedash River at County Road. | Jul. 21/67 | 1.9 | 176 | 18 | 158 | 2,200 |
| North River at County Road between Lots No. 3 & 4. | Jul. 21/67 | 1.1 | 182 | 8 | 174 | 76 |
| North River at County Line. | Jul. 21/67 | 1.3 | 136 | 13 | 123 | 236 |

MATCHEDASH

TWP. OF BAXTER

TWP. OF TAY

TWP. OF WOOD

TWP. OF MORRISON

TWP. OF ORILLIA

BIG CHUTE GENERATING STATION

GLOUCESTER POOL

BROADVIEW I.

SALISBURY I.

BURROWS L.

BUCKSKIN L.

MacLEAN L.

OTTER L.

TEA L.

WOOD BAY

SEVERN FALLS

SEE INSET

BUCKSKIN

TWP. DUMP

C.P.R.

SWIFT RAPIDS

DAM & POWER HOUSE

SEVERN

HYDRO GLEN

MATCHEDASH

DUMBELL L.

RIVER

LAWSON

LOVERING

NORTH

C.N.R.

EASTERN L.

WEST BAY

MATCHEDASH L.

I II III IV V VI VII VIII IX X XI XII XIII XIV XV

CREIGHTON'S STORE

RESTAURANT

REAL ESTATE

HOUSE

BOAT GARAGE

FOOT BRIDGE

TEXACO HOUSE

STORE

SEVERN RIVER

SEVERN FALLS
NOT TO SCALE

## LEGEND

S-19·9 – STREAM SAMPLING POINT SHOWING MILEAGE

ONTARIO WATER RESOURCES COMMISSION

# TOWNSHIP OF MATCHEDASH
## WATER POLLUTION SURVEY
## 1967

SCALE : 1 0 1 MILE

DRAWN BY : L. L. BROOME | DATE : AUGUST, 1967

CHECKED BY : M. H. | DRAWING No: 67-68